

REMARKS/ARGUMENTS

The present amendment is submitted in response to the Office Action dated September 24, 2010, which set a three-month period for response, making this response due by December 24, 2010.

Claims 17-20 and 22-32 are pending in the application.

In the Office Action, claims 17-20, 22 and 28-32 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 17, 22, 28 and 29 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,005,777 to Fernandez in view of U.S. Patent No. 4,217,788 to Burr et al or U.S. Patent No. 5,605,071 to Buchanan, Jr. Claims 18-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandez in view of Burr or Buchanan and further in view of U.S. Patent No. 4,546,933 to Kanada et al. Claims 30-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fernandez in view of Burr or Buchanan and Kanada and further in view of U.S. Patent No. 4,652,781 to Andrei-Alexandru et al.

In the present amendment, claims 17 and 22 have been amended to address the rejections under Section 112, second paragraph.

Claim 17 has been further amended to distinguish over the art of record. As disclosed in the specification, in the present invention, the carrier shaft 18 is non-displaceable, and the spiral toothing 19 is fixedly disposed on the carrier shaft 18 and therefore likewise is non-displaceable. By means of common and implied kinematics of the rotation of the individual gears of a spiral toothing with a rotating

carrier shaft, the effect according to the present invention comes into effect: the first thread of the toothing on the end of the spiral toothing, which is in contact with the frictional component, works in the axial direction against the friction element, although the toothing itself does not move.

The claims have been amended to reflect the above features.

As argued previously, the devices disclosed in the cited references are not comparable. The Examiner maintains in the Office Action that the Fernandez reference discloses in the abstract the function of the spiral toothing during a slow feeding of the safety belt, in which the control of the motor takes place via the longitudinal motion of the spiral toothing with the brush control 56, 60 connected thereon. During feeding of the safety belt, the belt shaft is rotated first slowly in the belt pull-out direction. When at the completion of the feeding process, no belt pull-out occurs any longer, then the motor is changed in a rotation motion of the belt shaft in the belt winding direction, in order to overcome eventual belt slackness. If in doing so, too great of a feed force is exerted on the occupants, then the motor controls its rotational direction again and rotates the belt shaft again in the belt pull-out/release position, so that some belt strap is released. This belt adjustment is not performed only during the pulling out of the safety belt, but also during normal movements of the restrained occupants during the trip.

In this respect, during pulling-out/withdrawal of the safety belt and during normal movements, respectively, the rotational direction of the motor is changed. A blocking of the rotation of the spiral toothing in one direction therefore is NOT provided, because the spiral toothing always adjusts itself during correspondingly slow rotation of the belt shaft.

The last four lines of the Fernandez abstract to which the Examiner refers in the Office Action only relate to the event of a crash. This crash event is described more specifically in column 11, lines 37-64 of Fernandez. In this case, the speed of the belt strap withdrawal plays an important role. Thus, during a slow belt strap withdrawal, a displacement of the spiral toothing for control of the motor takes place, and the toothing of the gear wheel 52 and the spiral toothing 54 are so designed, that the further rotation of the belt shaft is blocked. Also in the event of a crash, according to the last four lines of the abstract, a blocking of the rotation of the spiral toothing in only one direction plays NO role.

As defined in amended claim 17, the rotation of the spiral toothing should be unimpeded in one direction of rotation, while in the other direction of rotation, the rotation of the spiral toothing is prevented by engagement of the first thread. This aspect is NOT even mentioned by Fernandez. Either an immediate counter blocking in BOTH directions occurs in the vent of a crash, or a rotation of the spiral toothing with axial displacement in BOTH directions of the gear wheel 52 is permitted.

The displaceable shaft toothing in Fernandez makes impossible the claimed function of the present invention, specifically, that with a reversal of the rotational direction, a blocking of the rotational movement of the spiral toothing takes place. It is clear that Fernandez not only fails to disclose the non-self-blocking feature, but other features of the present invention as well.

Burr discloses on the one hand that a non-self-locking spiral toothing on a carrier shaft is known in the state of the art. Burr, however, also discloses that in such a case a brake must be provided in order to prevent a reverse rotation of the shaft. Burr provides a separate friction brake 32 for this purpose.

In comparing Burr with the present application, then, it is apparent that with the present invention, the separate friction brake 32 of Burr is replaced by the cooperation of the first gear of the spiral toothing with the friction-increasing component, for example the spacer disk 25. One of skill in the art would not be led to this feature of the present invention from the teachings of Burr, which teaches a completely different structure and concept. While Burr poses a similar problem, he resolves the problem with a completely different solution with the separate friction brake.

Regarding the Buchanan reference, it is again submitted that this reference has not been interpreted correctly. Buchanan shows an axial deviation of the spiral/worm toothing on both sides, and in this manner, a self-locking is avoided. Indeed, Buchanan shows only a gear assembly with a non-self-locking arrangement of a worm gearing with a toothed shaft. With overload in the transmission path, the worm gear arranged in bearings on both sides is axially displaced against a resilient force and thereby avoids an overload.

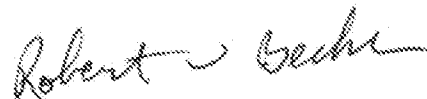
This has nothing to do with the object of the present invention, however, which is to increase friction such that with a reversal in the direction of rotation of the shaft, further rotation of the spiral gearing is prevented. Such a reversal in the rotational direction and the reasoning on which it would be based is not mentioned in Buchanan.

The Applicants further submit that one of skill in the art would not be motivated to combine Burr or Buchanan with Fernandez and that such a combination still would not lead to the present invention.

Based on the reasons set forth above, the Applicants respectfully submit that claim 1 as amended is not rendered obvious by the cited references whether viewed alone or in the proposed combination. It is respectfully submitted that since the prior art does not suggest the desirability of the claimed invention, such art cannot establish a prima facie case of obviousness as clearly set forth in MPEP section 2143.01.

The application in its amended state is believed to be in condition for allowance. Action to this end is courteously solicited. However, should the Examiner have any comments or suggestions, or wish to discuss the merits of the application, the undersigned would very much welcome a telephone call in order to expedite placement of the application into condition for allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert W. Becker", with a stylized flourish at the end.

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